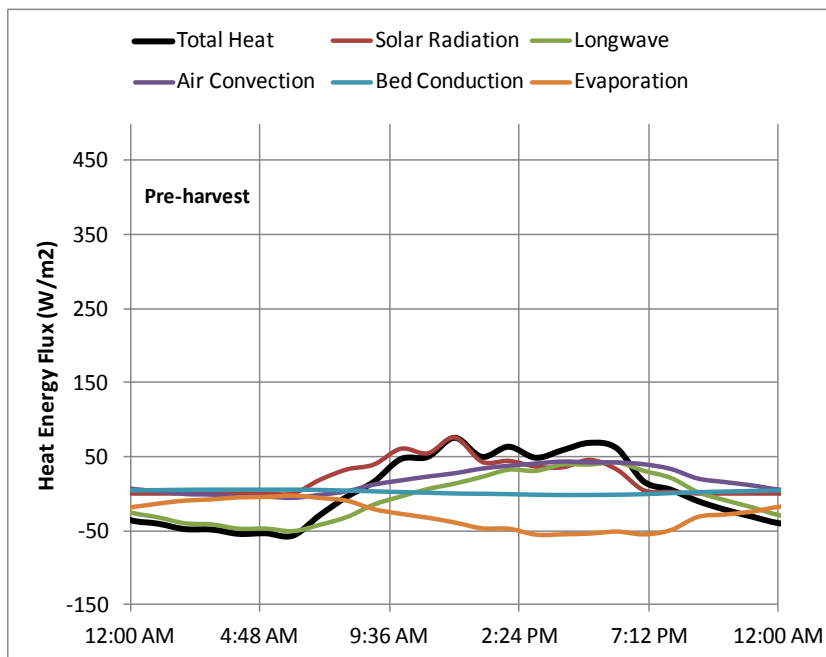


Water Quality Program

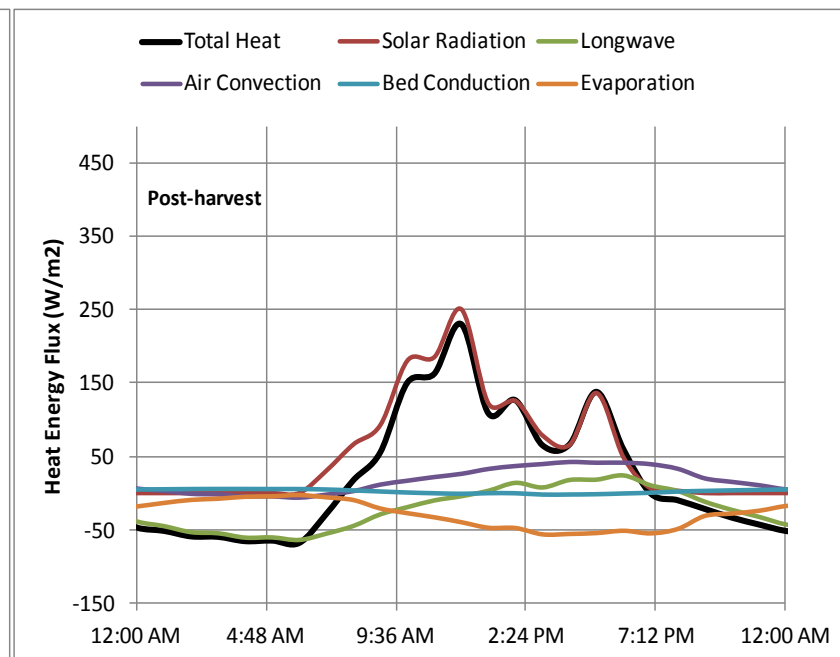
Figures for Oregon Forest Industry Council's Questions/Concerns Re: Protecting Cold Water Criterion

May 14th, 2014

Figure 1: Energy Fluxes @ RipStream Site 5556

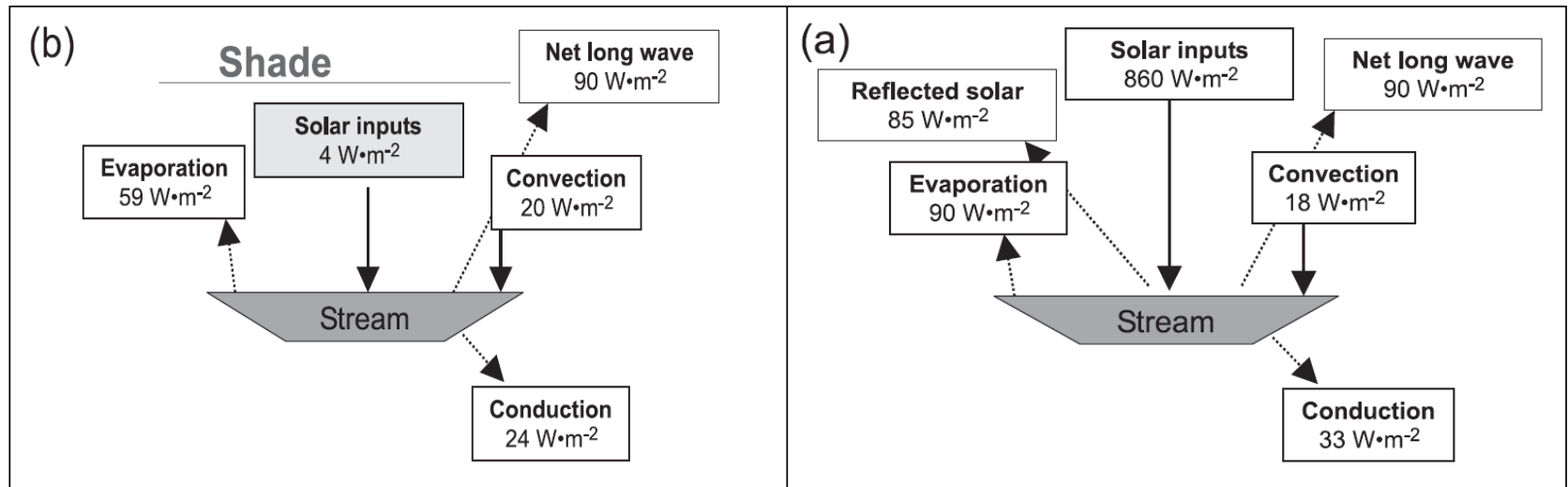


Modeled heat energy fluxes **pre harvest** at stream km 1.25 in the treatment reach on July 31, 2003.



Modeled heat energy fluxes **post harvest** at stream km 1.25 in the treatment reach on July 31, 2003.

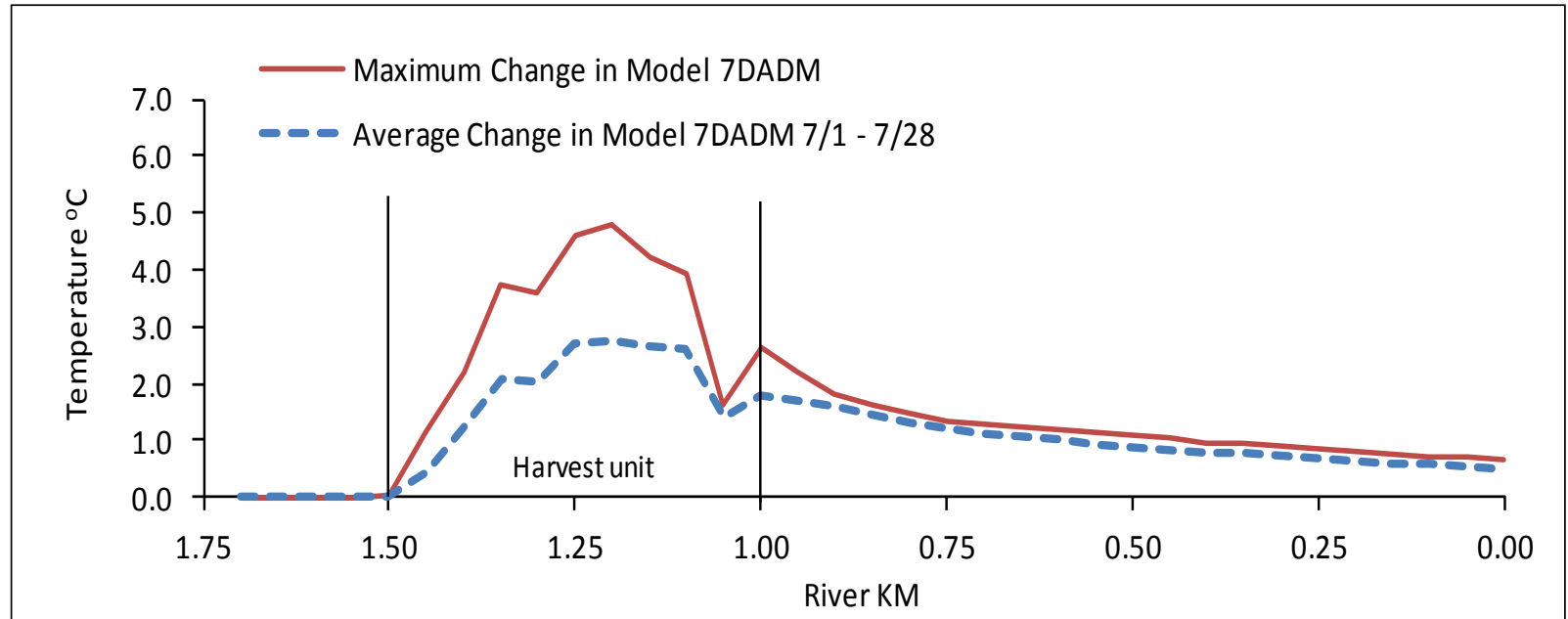
Figure 2: Field Measured Energy Fluxes



Heat energy fluxes at noon on July 20, 1997 on a **fully shaded** study stream in the H.J. Andrews Experimental Forest. **Heat energy lost is $-149 \text{ W}\cdot\text{m}^{-2}$.**

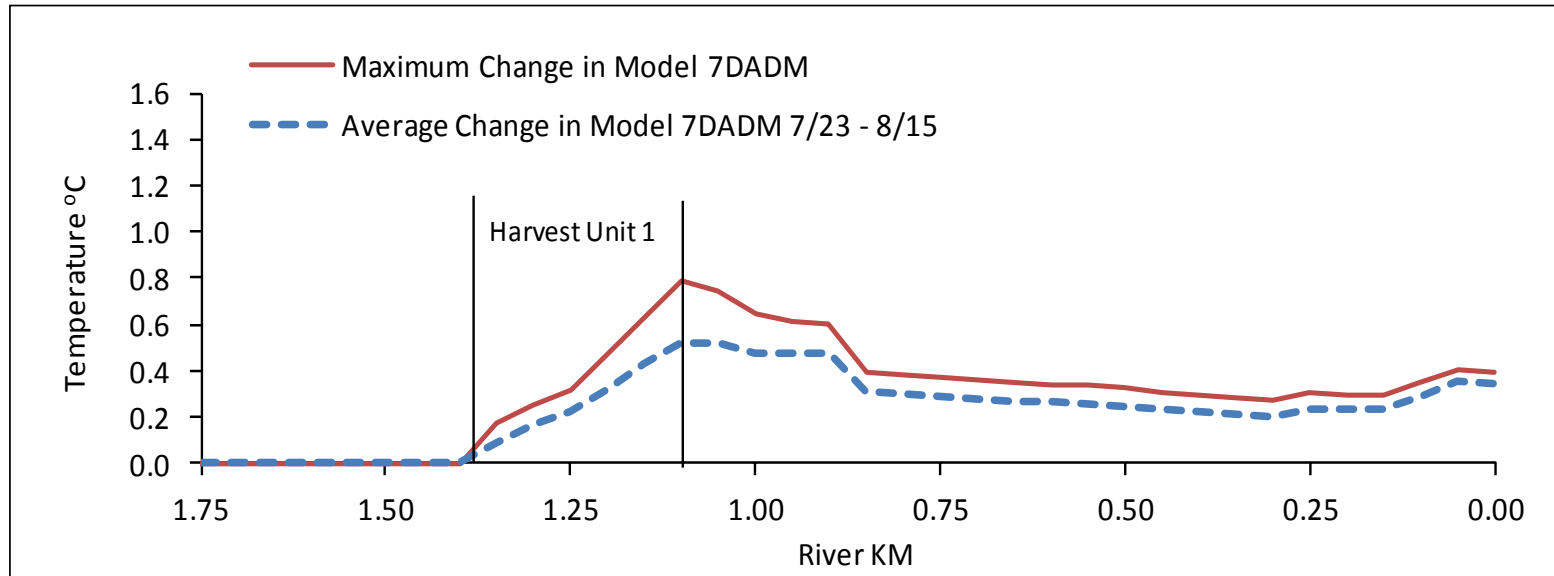
Heat energy fluxes at noon on July 20, 1997 on an **unshaded** study stream in the H.J. Andrews Experimental Forest. **Heat energy gained is $580 \text{ W}\cdot\text{m}^{-2}$.**

Figure 3: HeatSource Results for Argue Creek



Simulated change in longitudinal 7-day average daily maximum (7DADM) temperatures from harvest at RipStream site 7854, holding all factors constant except vegetation.

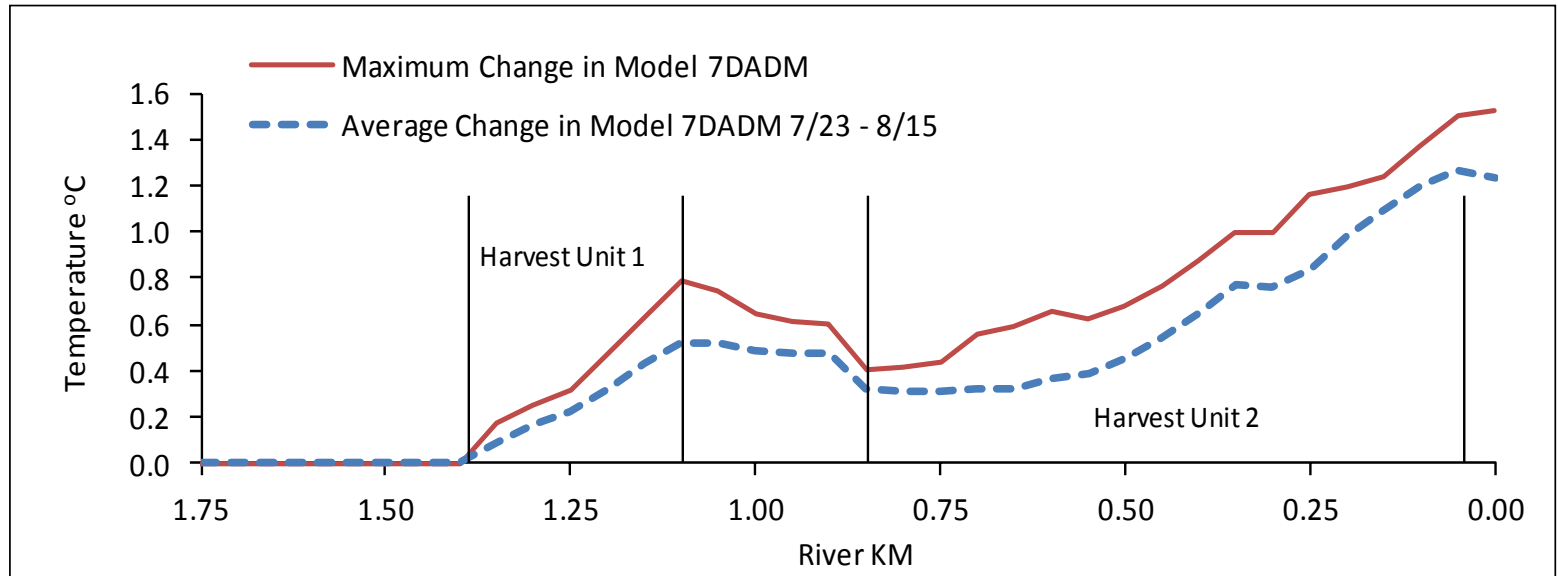
Figure 4: HeatSource Results for Drift Creek Trib



Simulated change in longitudinal 7-day average daily maximum (7DADM) temperatures from harvest at RipStream site 5556, holding all factors constant except vegetation.

Results only include effect of the Harvest Unit 1 in RipStream study area.

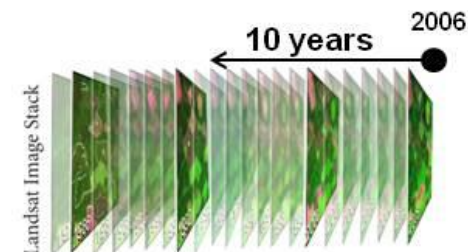
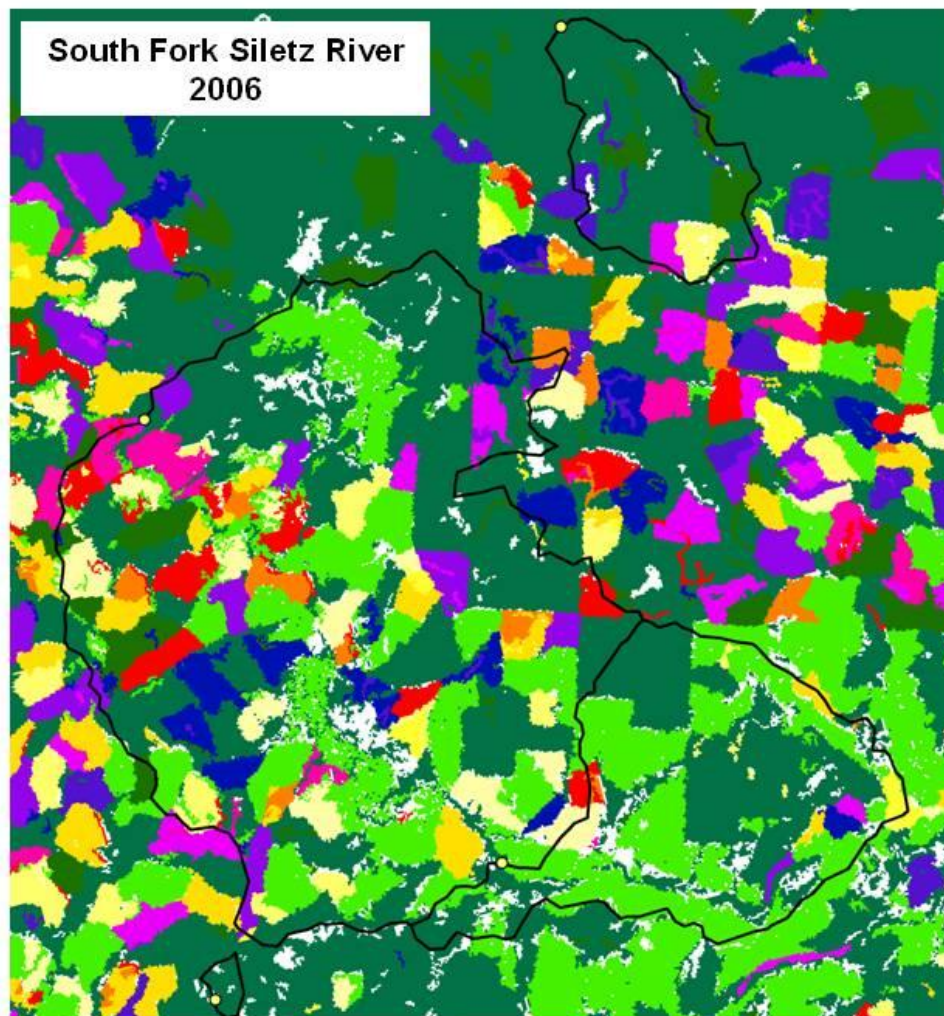
Figure 5: HeatSource Results for Drift Creek Trib



Simulated change in longitudinal 7-day average daily maximum (7DADM) temperatures from harvest at RipStream site 5556, holding all factors constant except vegetation.

Results include effects from the harvest unit in RipStream study area (Harvest Unit 1) and a second harvest unit downstream of the study area (Harvest Unit 2).

Figure 6: Change Detection Analysis



Kennedy et al 2010.

**Percent area disturbed
in 2006 = 17%**

Includes any harvest 10 years
prior from 1996-2006.

Color = harvested
1996 - 2006

White = Non forested
(Ag/Rural residential,
meadow)

Dark Green = not harvested
1985 - 2006.

Light Green = harvested
1985-1996. (Not counted in
total)

